

REMARKS

Reconsideration of this application is requested in view of the amendments to the claims and the remarks presented herein.

The claims in the application are claims 1 to 10 and 12 to 15, all other claims having been cancelled. It is noted that the Examiner has indicated that claim 6 is drawn to allowable subject matter.

Claims 1, 3 to 5, 8 to 10, 12 and 14 were rejected under 35 USC 112, second paragraph, as being indefinite. The Examiner objected to the term “such as” as being indefinite and objected to “essentially pure” and to the use of the term “preferably”. The Examiner objected to claim 12 as lacking support for the epoxide or the vicinal diols. The Examiner also objected to the expression “optionally” and as being drawn to multiple dependent claims.

Applicants respectfully traverse these grounds of rejection since it is believed that the amended claims properly define the invention. The terms “such as” and “preferably” and “especially” have been deleted from the claims and the term “essentially pure” is now defined as being “pure”. It is deemed that there is adequate support for the vicinal diols in claim 10 and the term “optionally” has also been deleted. With respect to the

definition of the various Rs, it is deemed that it is adequately illustrated in the specification and the definition thereof as being any group characteristic of pharmaceutical and plant protection compounds is well known to those skilled in the art. Therefore, it is deemed that the claims comply with 35 USC 112, second paragraph, and withdrawal of this ground of rejection is requested.

Claims 1 to 5, 7 to 10 and 12 to 15 were rejected under 35 USC 112, first paragraph, as not being based upon an enabling disclosure. It is believed that the amended claims properly define the invention since the expression objected to by the Examiner has been deleted from claim 1, namely, "derived by substitution suppression, or addition", etc. Therefore, withdrawal of this ground of rejection is requested.

Claims 1 to 10 and 12 to 15 were rejected under 35 USC 102(b) as being anticipated by the Arand et al reference. The filing of the certified translation of the French priority document obviates this ground of rejection and therefore, withdrawal of the same is requested. This also obviates the rejection based on Morisseau et al (V) since this has a July 1999 publication date which is subsequent to the May 5, 1999 priority date. Therefore, this ground of rejection is obviated as well.

Claims 1 to 5, 12 and 15 were rejected under 35 USC 102 as being anticipated by the Morisseau et al (U) reference which, according to the Examiner, teaches an epoxide

hydrolase from Aspergillus niger and deemed that the term “essentially pure” did not distinguish therefrom.

Applicants respectfully traverse this ground of rejection since it is deemed that the Morisseau et al reference does not teach Applicants’ invention. To the best of Applicant’s knowledge, the epoxide hydrolase claimed in this application was, at the date the application was filed, was the first epoxide hydrolase of fungal origin ever purified and studied. The U publication only describes a procedure for obtaining the claimed enzymatic activity out of the cell and showing that it was a soluble (cytosolic) enzyme and not a membrane bound protein. In contrast thereto, the Mammalian epoxide hydrolase previously described as known to be microsomal and the preparation process described in the reference only led to a very crude cell extract containing this indefinite native activity.

Therefore, at that time and due to the novelty of this “first fungal epoxide hydrolase discovery”, it was impossible for one skilled in the art to predict any efficient purification method for this enzyme since at the time of Applicant’s invention, no one had any idea about its thermal stability, its stability in the presence of salts, the type of columns to be used, its stability upon the overall purification process and the like. This issue is even more uncertain due to the fact that Applicants rapidly suspected this protein to be multimeric but it was later observed to be tetrameric. One skilled in the art would not know what its behavior would be and the remaining activity upon purification of such

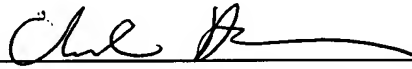
a potentially fragile enzyme really was unpredictable. In fact, Applicants worked very diligently for several months, if not a year, to set up the efficient purification conditions finally described in reference V. Therefore, the reference in no way anticipates or renders obvious Applicants' invention and withdrawal of this ground of rejection is requested.

Claims 1, 2, 5, 12 and 15 were rejected under 35 USC 102(e) as being anticipated by the Chartrain et al reference which, according to the Examiner, teaches a fungal epoxide hydrolase and the expression "essentially pure" does not distinguish therefrom.

Applicants respectfully traverse this ground of rejection since the Chartrain et al reference does not describe any purification procedure nor even a crude state of the epoxide hydrolase activity detected in the two fungi. This patent only mentions an indefinite epoxide hydrolase activity using "suspension of whole fungal cells" of the two fungus strains Diplodia gossipina or Lasiodiplodia theobromae which has nothing to do with the Aspergillus genus claimed in Applicants' application. Moreover, to the best of Applicants' knowledge since their work, no other epoxide hydrolase of fungal origin has yet been described, purified and studied and this obviously reflects the intrinsic difficulty of Applicant's invention. Therefore, withdrawal of this ground of rejection is requested.

In view of the amendments to the claims and the above remarks, it is believed that the claims clearly point out Applicants' patentable contribution and favorable reconsideration of the application is requested.

Respectfully submitted,
Muserlian, Lucas and Mercanti

A handwritten signature in black ink, appearing to read 'Charles A. Muserlian', is written over a horizontal line.

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Enclosures